

NEW SPECIES AND VARIETIES
OF
TERRESTRIAL AND FLUVIATILE SHELLS
FROM EQUATORIAL AFRICA

BY
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(With Plates IV-VI.)

Zingis aurea sp. n. — Pl. V, fig. 6.

Shell allied to *Z. gregorii*, SMITH ⁽¹⁾ from Mt Kenia, but with much more elevated spire, more convex base and higher and narrower aperture the columella descending more vertically than is the case with *Z. gregorii*.

Alt. 11.25, diam.-maj. 12.5, diam. min. 10.75 mm.

Aperture : alt. 8, diam 6.75 mm.

Hab. — Jombene Hills, at an altitude of 6,000 feet, British East Africa; also taken at Nyeri and Mweru in the lower country (ROBIN KEMP).

Zingis bullata sp. n. — Pl. V, fig. 4.

Shell somewhat globosely turbate, covered with a brown periostracum; whorls 5 ⁺, rather rapidly increasing, the last globose, descending in front,

(1) Proc. Malac. Soc., London, I p. 164.

marked with very coarse, transverse, arcuate growth plicæ; suture well impressed; umbilicus moderately narrow, very deep; columella descending obliquely, outwardly reflexed above; labrum acute; aperture very broadly sublunate.

Alt. 12, diam.-maj. 16, diam.-min. 13 mm.

Aperture : alt. 6.5, diam. 7 mm.

Hab. — Nakuru, British East Africa (ROBIN KEMP).

Martensia levistriata sp. n. — Pl. V, fig. 2.

Shell perforate, rather depressedly conic, shining, light reddish chestnut encircled by a narrow, white, supersutural ridge which appears as a whitish keel on the last whorl; whorls 6, scarcely inflated, the first whorl and a half minutely, spirally striate, the remainder sculptured with *very fine*, closely set, somewhat arcuate, oblique, transverse striae; suture impressed, margined above with the white ridge above mentioned; base of shell sculptured with rather close, wavy, spiral striae; umbilicus moderately narrow, deep; columella outwardly expanded above, descending in a somewhat oblique curve, a thin, well defined, parietal callus joining it with the lip above; labrum thin, acute; aperture obliquely sublunate.

Alt. 12, diam. maj. 19, diam. min. 16.5 mm.

Aperture : alt. 7.5, diam. 8.5 mm.

Hab. — Between Mt. Kenia and Eusso Nyiro, British East Africa (ROBIN KEMP).

Martensia nyiroensis sp. n. — Pl. V, fig. 1.

Shell depressedly, turbinate moderately thin, polished, yellowish-white, painted on the upper whorls with a light red, narrow, supersutural band and on the last whorl with two rather broad, spiral bands of the same colour, one just above and one immediately below the periphery; whorls 6^{1,2}, the first three somewhat exserted, the remainder sloping, not very convex, sculptured with fine, closely set, oblique, arcuate, transverse striae; suture impressed; base of shell marked with lines of growth and sculptured with fine, wavy somewhat closely set, revolving striae; umbilicus moderately narrow, deep, partially covered by the outward expansion of the columella; columella outwardly expanded, descending rather obliquely, angled below; labrum simple, receding basally; aperture broadly sublunate.

Alt. 13, diam. maj. 20, diam. min. 18.25 mm.

Aperture : alt. 9, diam. 9.25 mm.

Hab. — Mount Nyiro, to the South of Lake Rudolph (A. BLAYNEY PERCIVAL).

Martensia voiensis sp. n. — Pl. V, fig. 3.

Shell perforate, subdiscoidal, depressedly turbinate, yellowish, occasionally irregularly marked with transverse streaks of ashen gray which are more apparent on the last whorl and the base of the shell; whorls 6, regularly increasing, the last carinate at the periphery, sculptured with moderately coarse, oblique and somewhat curved, transverse, closely set costulae; suture impressed, narrowly margined above with a cream coloured, thread-like ridge; base of shell marked with growth lines and sculptured with fine, wavy, revolving striae only; umbilicus somewhat narrow, partly concealed by the reflexion of the columella; columella curved above, obliquely descending below; labrum simple; aperture subquadrate.

Alt. 12.5, diam. maj. 21, diam. min. 18.25 mm.

Aperture : alt. 9, diam. 10.25 mm.

Hab. — Voi, British East Africa (W. FEATHER).

Martensia inflata sp. n.

Shell rimate, turbinate, inflated, thin, semi-transparent, whitish-yellow; whorls $6\frac{1}{2}$, regularly increasing, the last subangulate at the periphery, the apical whorls spirally striate the remainder sculptured with moderately fine and closely set, oblique arcuate costulae; base of shell marked with fine, somewhat distant, wavy, revolving, scratch-like striae; suture impressed; umbilicus narrow, deep; columella tinged with pale lilac, rather obliquely curved, broadly, outwardly expanded above and diffused into a thin, well defined, outwardly spreading, parietal callus which reaches the upper margin of the labrum; labrum simple, acute; aperture obliquely, broadly sublunate.

Alt. 14, diam. maj. 18.25, diam. min. 16.5 mm.

Aperture : alt. 9.75, diam. 8.75 mm.

Hab. — Urguess, British East Africa (A. BLAYNEY PERCIVAL).

Martensia solida sp. n. — Pl. V, fig. 5.

Shell perforate, turbinate, very solid, calcareous, brownish-yellow above, pale straw-colour beneath, the spire encircled by a broad, indistinct, pale reddish, supersutural band which increases to two, one above and one below the periphery, on the last whorl; whorls $6\frac{1}{2}$, regularly increasing, flattish, the last bluntly angled at the periphery, the first whorl very finely,

spirally striate and minutely granular, the remainder sculptured with fine, closely set, very oblique, somewhat arcuate, transverse costulae; base of shell marked with growth lines and moderately fine, spiral, wavy, scratch-like striae; suture impressed, very narrowly margined above with an indistinct, spiral, whitish ridge-like callus; umbilicus narrow, deep, partly concealed by the outward expansion of the columella; columella descending in a very oblique curve.

Alt. 16.26, diam. maj. 22.5, diam. min. 21 mm.

Hab. — Between Mt. Kenia and Nyiro, British East Africa (A. BLAYNEY PERCIVAL).

A very remarkable species of which, unfortunately, only a single specimen was collected and which is so much broken at the mouth as to make it impossible to describe the labial and apertural characters; it is possible that in perfect specimens the umbilicus may be almost sealed by the outward expansion of the columella and probably the aperture is broadly sublunate in shape; the size, colouring and great solidity of the shell however easily separate it from any other member of the group as yet described.

Ena kivuensis sp. n. — Pl. VI, fig. 1.

Shell differing from *Glaudina boivini* MOREL⁽¹⁾, chiefly in the columella, which is shorter and more oblique, in the labrum which is slightly more dilated below and bent inwards over the aperture above, and in the aperture which is much shorter and broader and is not angled at the base of the columella.

Alt. 22.5, diam. maj. 10.25, diam. min. 8.75 mm.

Aperture : alt. 8, diam. 5 mm.

Hab. — Kisengi, Lake Kivu (ROBIN KEMP).

Cerastus kivuensis sp. n. — Pl. IV, fig. 1.

Shell rimate, ovately fusiform, moderately thin, pale brown, slightly polished; whorls 6, marked with regular, oblique, transverse costulae and sculptured with fine, transverse and spiral striae thus presenting a somewhat finely decussate appearance; suture narrowly margined below; perforation narrow, deep, partly concealed by the outward expansion of the columella;

(¹) MORELET, sér. Leriche, p. 72.

columella broadly, outwardly expanded above, almost vertically descending, diffused above into a faint callus which scarcely reaches the upper margin of the labrum; labrum yellowish-flesh colour, somewhat dilated, expanded and reflexed; aperture somewhat shortly inversely auriform.

Alt. 23, diam-maj. 13, diam. min. 11 mm.

Aperture : alt. 10, diam. 5.75 mm.

Hab. — Near Lake Kivu (ROBIN KEMP).

Cerastus Kempfi sp. n. — Pl. IV, fig. 3.

Shell ovately fusiform, yellowish-olive in colour, painted *internally* with an infrasutural, spiral band of deep purple which shows through the test more faintly on the lower whorls as the shell thickens, and a very broad, internal, circum-umbilical band of the same colour which also shows dully through the test; whorls 6, the first five regularly increasing, the last rather large, polished, shining, marked with minute, scratch-like, horizontal striae and oblique, transverse plicae, the latter being more noticeable in the infrasutural region and becoming obsolete on the last whorl, the last whorl is also much malleated, the malleation becoming much coarser towards the labrum; suture impressed, slightly, irregularly crenulate and narrowly margined below; umbilicus narrow, deep, almost entirely concealed by the outward reflexion of the columella; columella descending in a curve, the inner zone stained with deep purple, the median zone white, the outer zone stained with yellowish-flesh colour, almost laminiferous, reflexed; labrum white, with outer margin flesh-coloured, expanded and reflexed, laminiferous and somewhat roughened, projecting in front and again above, receding below and above between the projecting portions; aperture irregularly ovate, rather oblique; interior of shell and parietal wall painted round with a broad band of purple.

Alt. 17, diam. maj. 10.25, diam. min. 8 mm.

Aperture : alt. 6.75, diam. 4.25 mm.

Hab. — Burunga, Mount Mikeno, Belgian Congo, at an altitude of 6,000 feet (ROBIN KEMP).

In some specimens the whole of the apical whorls are painted a dark purple, while in others the entire labrum is suffused with reddish-purple.

Cerastus Kempfi var. **masakaensis** var. n.

Shell differing from the typical form in being of a pale straw-colour and in lacking the purple colour bands both sutural and otherwise, the outer

margin of the labrum is of a dull brown earth-colour and the umbilicus is more open.

Alt. 18.25, diam. maj. 11.5, diam. min. 9 mm.

Aperture : alt. 7.5, diam. 4.5 mm.

Hab. — Masaka, Uganda, together with the typical form (ROBIN KEMP).

Cerastus partulaeformis sp. n. — Pl. IV, fig. 2.

Shell ovately fusiform, white shading to cream-colour on the latter half of the last whorl, whorls 6, regularly increasing, slightly polished, the upper whorls marked with rather coarse, oblique, transverse growth striae, the last malleated and sculptured with irregular, scratch-like, spiral striae in addition to the growth lines which are much coarsened; suture impressed; umbilicus narrow, deep, half concealed by the broad expansion of the columella lip; columella descending in a slightly angular curve, tinged with dark chestnut-purple above and diffused into a well defined, cream-coloured callus which reaches the upper margin of the labrum; labrum white, rather broadly expanded especially below, narrowly reflexed, rather coarsely roughened in texture; aperture inversely auriform; interior of shell whitish, granular, tinged with an ill defined band of lilac-chestnut just within the aperture and across the parietal wall.

Alt. 18.25, diam. maj. 12, diam. min. 8.5 mm.

Aperture : alt. 8, diam. 4 mm.

Hab. — Lake Kivu (ROBIN KEMP).

An extraordinary shell which together with the preceding species recalls the genus *Partula* from the Western Islands of the Pacific Ocean.

Leucochiloides consanguineus sp. n. — Pl. IV, fig. 5.

Shell differing from *L. gaziensis*, PRESTON⁽¹⁾ in its smaller size, narrower form, much more inflated whorls and consequently still more deeply impressed suture.

Alt. 3.5, diam. maj. 1.5 mm.

Aperture : alt. 0.75, diam. 0.25 mm.

Hab. — Gazi, British East Africa (ROBIN KEMP).

(1) Proc. zool. Soc., London, 1912, p. 188, pl. XXXI, fig. 19.

Kempia subgen. n.

Differing from typical *Pseudoglessula* in the columella which is *not* truncate, but continuous with the labrum, through sharply, obliquely curved below and in lacking the peripheral carina of that genus.

Genotype. *K. kivuensis*.

The above subgenus would appear in some respects to form a link between *Pseudoglessula* and *Limicolaria*, but I incline to place it as a subgenus of the former, rather than to raise it to the rank of a genus intermediate between the two.

Kempia kivuensis sp. — Pl. IV, fig. 3.

Shell cylindrically fusiform, moderately solid, shining, reddish brown; whorls 7, the first minute, the second and third large in proportion, the remainder regularly increasing, the last rather long, the apical whorls coarsely, distantly and somewhat obliquely, transversely costulate, the remainder finely, closely and rather obliquely so, the costulae becoming subobsolete on the lower portion of the last whorls; suture impressed, narrowly and indistinctly margined below; columella tinged with livid-lilac, slightly obliquely descending above and very obliquely below, diffused above into a very light, well defined, granular, parietal callus which reaches the upper margin of the labrum; labrum simple, not very acute, dilated at the base, bent very slightly inwards over the aperture above; aperture rather elongately, inversely auriform; interior of shell pale bluish-lilac.

Alt. 27, diam. maj. 11.5 mm.

Aperture : alt. 11, diam. 5 mm.

Hab. — Lake Kivu (ROBIN KEMP).

Kempia burungaensis sp. n. — Pl. VI, fig. 2.

Shell differing from *K. kivuensis* in its shorter and less cylindrical form, much lighter colour, which is of a dull yellowish straw-colour, and finer apical sculpture.

Alt. 23-75, diam. maj. 1.15 (nearly), diam. min. 10.25 mm.

Aperture : alt. 10.5, diam. 4.25 mm.

Hab. — Burunga, Mount Mikeno, Belgian Congo, at an altitude of 6,000 feet (ROBIN KEMP).

Homorus rex sp. n. — Pl. IV, fig. 8.

Shell allied to *H. egregius*, PRESTON (*) also from Mount Kenia but differing in its larger size, it having two whorls more than that species, the whorls are also rather more convex and the last is proportionately much shortened; the columella is excavated below and very much more curved and the aperture is much shorter for the size of the shell, it being almost ovate in shape.

Alt. 59, diam. maj. 13, diam. min. 12 mm.

Aperture; alt. 12, diam. 6.75 mm.

Hab. — Mt. Kenia, British East Africa (ROBIN KEMP).

Enonyma achilles sp. n. — Pl. IV, fig. 7.

Shell subrimate, bluntly subulate, polished, shining pale straw-colour; whorls 11, flattish, the first small, the second rather large in proportion, the remainder regularly increasing, smooth, but for oblique, transverse growth ridges which are more noticeable in the subsutural region; suture impressed, somewhat puckered below by the terminations of the transverse growth ridges; umbilicus reduced to a mere chink, almost covered by the narrow reflexion of the columella; columella very obliquely descending above, rather strongly curved below, narrowly outwardly reflexed and diffused into a thin, well defined, parietal callus the inwardly curved margin of which reaches to the extreme upper limit of the labrum; labrum somewhat overhanging the aperture in the upper region, then projecting in front and *rapidly receding* below; aperture ovate; interior of shell pale livid-gray.

Alt. 51, diam. maj. 12.25 mm.

Aperture : alt. 11, diam. 6.5 mm.

Hab. — Urguess, British East Africa (A. BLAYNEY PERCIVAL).

Auricula gaziense sp. n. — Pl. V, fig. 13.

Shell ovately fusiform, moderately solid, dark straw-colour; remaining whorls 6, finely, decussately sculptured on the upper portion only; suture impressed, irregularly crenellate, broadly margined below; columella twisted below, bearing a single, revolving plait above, a thin, somewhat sinuous, parietal callus joining it with the lip above; labrum acute, contracted above,

(*) Annals and Magazine of Natural History, vol. VII, 1911, p. 472, pl. XII, fig. 26.

rather erectly dilated below; aperture very narrowly and elongately inversely auriform.

Alt. 17.75, diam. maj. 7.75, diam. min. 7 mm.

Aperture : alt. 12, diam.-maj. 2.5 mm.

Hab. — Gazi, British East Africa (ROBIN KEMP).

Differing from *A. tornatelliniformis* PET. (1), to which it is closely allied, in its finer sculpture on the upper part of the whorls and in having no decussate sculpture at all on their lower portion.

Physopsis choziensis sp. n. — Pl. V, fig. 12.

Shell narrowly perforate, rather elongately ovate with very obtuse apex, very pale brownish-yellow; whorls 4, rapidly increasing, the last large, shouldered above and microscopically sculptured with very fine, wavy, transverse ridges which occasionally converge; suture impressed; perforation very narrow, almost entirely covered by the outward reflexion of the columella; columella white with the exception of the extreme outwardly reflexed margin which is of the same colour as the remainder of the shell, rather obliquely descending, obliquely truncate below; labrum acute; aperture very elongately, inversely auriform.

Alt. 14.75, diam. maj. 9, diam. min. 8.5 (nearly) mm.

Aperture : alt. 9.25, diam. 4.5 mm.

Hab. — Chozi River, a tributary of the Chambzi, flowing into Lake Bangweolo from the east.

Physopsis rekwaensis sp. n. — Pl. V, fig. 11.

Shell narrowly perforate, ovate, sinistral, pale yellowish-olive; whorls 4, rapidly increasing, not shouldered, the last large, sculptured with somewhat wavy, transverse ridges crossed by very fine, spiral lines; suture impressed; perforation very narrow, deep, partly concealed by the outward reflexion of the columella; columella vitreous, diaphanous, nearly vertically descending, bearing a sharp, broad, slightly twisted, white lamella below, broad and outwardly reflexed above and diffused into a light, parietal callus which reaches the upper margin of the labrum; labrum acute, dilated and slightly reflexed below; aperture elongately ovate.

(1) Proc. Zool. Soc., London, 1854, p. 7.

Alt. 13.5, diam. maj. 9.75, diam. min. 7.25 mm.
Aperture : alt. 8.25, diam. 4.25 mm.

Hab. — Lake Rekwa, German East Africa.

Physa exserta sp. n. — Pl. V, fig. 9.

Shell sinistral ovately fusiform, with exserted spire, narrowly perforate, thin, semi-transparent, yellowish horn-colour; whorls 4, rather rapidly increasing, the last somewhat convex, marked with coarse, irregular growth lines; suture very deeply impressed; umbilicus very narrow, deep, almost concealed by the reflexion of the columella; columella vitreous, outwardly expanded, slightly twisted, descending vertically, excavated below, diffused above into a thin, glassy, well defined callus which reaches the upper margin of the labrum; labrum acute; aperture somewhat irregularly, inversely auriform.

Alt. 15.5, diam. maj. 9.5, diam. min. 8 mm.
Aperture : alt. 10, diam. min. 5 mm.

Hab. — Lake Baringo, British East Africa (ROBIN KEMP).

Physa laikipiaensis sp. n. — Pl. V, fig. 14.

Shell perforate, ovately fusiform with exserted spire, yellowish horn-colour; whorls 4.5, marked only with transverse growth ridges, somewhat convex; suture deeply impressed; umbilicus moderately narrow, deep, partly overhung by the reflexion of the columella; columella yellowish, obliquely descending above, very slightly inwardly bulging, curved at the base, outwardly reflexed, the reflexion being gently constricted in the median part; labrum acute, slightly bent inwards over the aperture above and dilated below; aperture ovate, the rounded parietal wall bulging into it.

Alt. 17, diam. maj. 10, diam. min. 9 mm.
Aperture : alt. 9.25, diam. 5.75 mm.

Hab. — Laikipia Plateau, at an altitude of 7,000 feet, British East Africa (ROBIN KEMP).

Physa syngenes sp. n. — Pl. V, fig. 10.

Shell allied to *P. laikipiaensis*, but considerably more elongated and somewhat narrower than that species, the parietal wall is straight and does not bulge into the aperture and the straight columella descends rather

obliquely, while the aperture is much higher and proportionately narrower than is the case with *P. laikipiaensis*.

Alt. 19.5, diam. maj. 10, diam. min. 9 mm.

Aperture ; alt. 11.25, diam. 5.25 mm.

Hab. — Lake Naivasha, British East Africa (ROBIN KEMP).

Physa masakaensis sp. n. — Pl. V, fig. 7.

Shell moderately large, ovate, with exserted spire, perforate, polished, shining, somewhat thin, dark reddish-brown; remaining whorls 3, shouldered above, marked with fine, transverse striae which become obsolete on the lower portion of the last whorls; suture impressed, crenellated by the terminations of the transverse striae; umbilicus narrow, deep; columella obliquely descending, rather broadly, outwardly expanded and diffused above into an extremely thin callus which reaches the upper margin of the labrum; labrum thin, acute, dilated below; aperture rather elongately ovate.

Alt. 16.75, diam. maj. 11.25, diam. min. 9 mm.

Aperture : alt. 11, diam. 5 mm.

Hab. — Masaka, S.-W. Uganda (ROBIN KEMP).

Physa mutandaensis sp. n. — Pl. V, fig. 8.

Shell ovate, rimate, moderately thin, slightly polished, reddish-brown, ornamented with a broad, subsutural band of yellowish-brown; whorls 4, the first three regularly increasing, small, compressed, the last large, long, slightly inflated, shouldered above, obsoletely plicate; suture impressed, margined below; umbilicus very narrow, almost concealed by the outward expansion of the columella; columella descending vertically, rather narrowly, outwardly expanded and diffused above into a thin, diaphanous, parietal callus which reaches the upper margin of the labrum; labrum simple, acute; aperture elongately and narrowly, inversely auriform.

Alt. 13, diam. maj. 8.75, diam. min. 7 mm.

Aperture : alt. 8.75, diam. 4.25 mm.

Hab. — Lake Mutanda, S.-W. Uganda (ROBIN KEMP).

Physa rumrutiensis sp. n.

Shell sinistral, irregularly ovate, perforate, thin, pale corneous; remaining whorls 4, rather rapidly increasing, the last not very globose, marked

with fine, transverse striae and coarse growth lines, rather finely malleated; suture impressed; umbilicus moderately narrow, deep; columella curved, peristome continuous, the outer edge membranaceous; aperture broadly, inversely auriform.

Alt. 9, diam. maj. 6, diam. min. 4.75 mm.

Aperture : alt. 4, diam. 2 mm.

Hab. — Between Rumruti and Mount Kenia, British East Africa (ROBIN KEMP).

Malania maraensis sp. n. — Pl. VI, fig. 5.

Shell subulately fusiform, moderately solid, pale yellowish-brown, painted, especially on the upper remaining whorls, with transverse purplish bands and flame markings; remaining whorls 5, somewhat convex, sculptured throughout with rather closely set, spiral lirae, crossed by coarse, transverse striae, thus presenting an almost cancellate appearance, the first two remaining whorls also bear transverse riblets, these, however, become obsolete on the third and disappear altogether below; suture impressed, rather broadly margined below; columella descending in a curve; labrum acute, very slightly dilated below, somewhat projecting below in front, receding above and at the base; aperture inversely auriform; operculum small, horny, very slightly concave, laminiferous, dark reddish-brown, with excentric nucleus.

Alt. 24.5, diam. maj. 9, diam. min. 7.75 mm.

Aperture : alt. 8.5, diam. 4 mm.

Hab. — The Eusso Mara River, a tributary of the Eusso Nyiro, British East Africa, at an altitude of 3,500 feet, found adhering to the lower surface of stones (ROBIN KEMP).

All the specimens taken by Mr KEMP, unless very young, are decollated and considerably eroded above, they are also thickly encrusted with a blackish deposit, extremely difficult to entirely remove.

Vivipara alhiensis sp. n. — Pl. IV, fig. 4.

Shell perforate, thin, semi transparent, turbinately ovate, pink, covered with a thin, greenish-olive periostracum, showing traces of having been encircled with fine, shortly hispid, spiral striae; whorls 4, somewhat convex, the embryonic whorl somewhat loosely coiled, sharply ridged above so as to form an inner, semicircular depression, the antipenultimate

and penultimate whorls indistinctly bicarinate, the last whorl inflated without sign of carination, marked throughout with spiral striae crossed, especially on the last whorl, with very closely set, transverse striae; suture impressed, umbilicus narrow, deep, half concealed by the outward extension of the columella; columella descending in a curve, outwardly expanded and spreading above into a coarse, well defined, black margined, parietal callus which joins it with the upper margin of the labrum; labrum simple; also narrowly margined with black; aperture broadly ovate; interior of shell pale livid flesh-colour; operculum thin, horny, slightly concave, multispiral with subcentral nucleus.

Alt. 17.5, diam. maj. 14, diam. min. 10 mm.

Aperture : alt. 9.75, diam. 7.25 mm.

Hab. — Alli Plains, British East Africa (A. BLAYNEY PERCIVAL).

Cleopatra congener sp. n. — Pl. IV, fig. 6.

Shell differing from *Melania ferruginea* LEA⁽¹⁾ in having the last whorl less convex at the periphery and the spire less acute, in being narrowly umbilicate and in the shape of the aperture which, in the present species, is more roundly ovate, moreover the labrum is not dilated at the base which is the case in all the specimens of the very large series of *M. ferruginea* which I have before me

Alt. 20.25, diam. maj. 11, diam. min. 10 mm.

Aperture : alt. 8, diam. 5 mm.

Hab. — Lake Baringo, British East Africa (ROBIN KEMP).

Unio (Nodularia) nyassanus LEA⁽²⁾ var. **hercules** var. n. — Pl. IV, fig. 10.

Shell much larger than the typical form, covered with a bronze-brown periostracum, more rounded anteriorly from the umbones downwards and having the posterior side more sloping above and more rostrate below.

Long. 33.5, lat. 41, diam. 21 mm.

Hab. — Shire River, near its outflow from Lake Nyassa.

(¹) Proc. Zool. Soc., London, 1850, p. 182.

(²) Proc. Acad. Nat. Sc. Philad., VIII, 1864, p. 108.

Unio (Nodularia) caesariana sp. n. — Pl. IV, fig. 9

Shell allied to *Unio nyassanus* LEA, but differing from that species in its paler colour, more elongate and rectangular form and finer, much more diffused and more noticeable sculpture.

Long. 22, lat. 31, diam. 14.5 mm.

Hab. — Lake Nyassa.

Unio (Nodularia) luapulaensis sp. n. — Pl. IV, fig. 11.

Shell moderately convex and thin, ovate, covered with a blackish-brown periostracum becoming somewhat scabrous posteriorly, marked with coarse, concentric growth striae and posteriorly sculptured above only with fine, radiate ridges; umbones much eroded, not prominent, smooth; dorsal margin arched and sloping; ventral margin slightly rounded; anterior side rather obtusely angled above and rounded below; posterior side sloping above, acutely rounded below; right valve bearing a nearly straight, erect, lateral tooth which has a fine, roughened, file-like appearance above, and two slightly elongate, rather oblique, parallel, cardinal teeth, the inner of which is the shorter, larger, and more erect and is also jagged along the upper edge; left valve bearing a long, bifurcating, lateral tooth and two cardinals of which the anterior is much the larger, erect, sloping posteriorly, roughened on both sides, jagged above and broadening out into a roughened shelf, below which the posterior is small, roughened at the sides, but scarcely jagged above and slightly overhanging the interior of the shell; anterior muscular scars very deeply impressed, posterior scars very lightly marked; interior of shell nacreous, pinkish, shading to bluish at the lower posterior side, showing traces of radiate striae, especially posteriorly and very slightly granular towards the umbonal cavity.

Long. 25, lat. 40.5, diam. 15 mm.

Hab. — Confluence of the Lukulu and Luapula Rivers, Belgian Congo.

Unio (Grandidieria) tanganyicencis, SMITH (1) var. **exalbida**
var. n.

Shell differing from the typical form in its almost white, though iridescent, interior and in being exteriorly covered with a pale yellowish perio-

(1) Proc. Zool. Soc., London, 1880, p. 351, pl. XXXI, fig. 9-9^a.

tracum which, however, still faintly shows the green radiate bands of the typical form.

Long. 17.75, lat. 24.5, diam. 11.5 mm.

Hab. — Lake Tanganyika.

Mutela lukuluensis sp. n. — Pl. VI, fig. 4.

Shell moderately convex, elongately, ovately cuneiform, brown, glossy, except on the posterior third portion where the periostracum becomes dull and somewhat scabrous, marked with moderately fine, concentric growth lines and radiately striate in the median and anterior regions; umbones not prominent; dorsal margin very gently arched and sloping; ventral margin nearly straight, very slightly contracted in the median part; anterior side rounded; posterior side sloping above, bluntly rostrate below; muscular scars ovate well impressed; interior of shell dark bluish iridescent.

Long. 24.5, lat. 50.25, diam. 13 mm.

Hab. — Confluence of the Lukulu and Luapula Rivers, Belgian Congo.

Mutela sarae sp. n. — Pl. VI, fig. 6.

Shell rather convex, elongately subrectangular, covered with a chocolate-coloured periostracum which becomes somewhat finely laminiferous towards the ventral margin and posterior side and shows traces of radiate striae; umbones slightly prominent; dorsal margin very gently sloping; ventral margin almost straight, a little contracted in the median part; anterior side rounded; posterior side sloping above, somewhat rostrate below; muscular scars ovate, anteriorly deeply impressed, posteriorly lightly so; interior of shell nacreous, pale pinkish-purple.

Long. 27, lat. 57.5, diam. 17 mm.

Hab. — Shire River, near its outflow from Lake Nyassa.

Mutela mathildae sp. n. — Pl. VI, fig. 7.

Shell allied to *M. sarae*, but more convex and ovate, the colour is dark olive-green shading to chocolate towards the margins and the radiate striae are more apparent; the dorsal margin is rather more sloped and the ventral margin slightly rounded, though contracted in the anterior median region; the anterior side is more rounded above and sloping below and the posterior

side though sloping above is rounded and not at all rostrate below; the muscular scars are well impressed on both sides and the interior of the shell is generally whitish.

Long. 32, lat. 62.5, diam. 21.75 mm.

Hab. — Shire River.

Spatha mwayana sp. n. — Pl. V, fig. 15.

Shell elongately ovate, solid, covered with a rather thin and glossy reddish-brown periostracum which becomes thicker and somewhat finely scabrous towards the posterior side, marked with concentric growth lines and traces of very fine, radiate striae: umbones small, not prominent; dorsal margin scarcely arched, sloping; ventral margin slightly contracted in the median region, otherwise straight; anterior side gently rounded; posterior side sloping above then somewhat sharply rounded and again sloping below; anterior scars ovate, both these and the posterior scars well impressed; palleal line well marked, almost parallel with the ventral margin, posteriorly rather abruptly rounded; interior of shell pinkish, iridescent, marked with radiate striae.

Long. 39.5, lat. 70.75, diam. 17.5 (Type).

Another specimen : Long. 42.5, lat. 78 mm.

Hab. — Mwaya, shores of Lake Nyassa, in German Territory.
